

S1 Table. Molecular effects of cyclosporine A (CsA) within the hair follicle.

CsA biological effect	Model	Changes in mRNA expression	Changes in protein expression	Changes in WNT pathway? (increase/decrease)	Changes in SFRP1?	Ref
1. Induction of hair growth	Sprague-Dawley rat	Amelogenin (↑) Lamp-1 (↓) Lamp-2 (↓)	Amelogenin (↑) Lamp-1 (↓)	x	x	1
1. Increased HF size and density 2. Delay catagen entry 3. Prevent AIF release from mitochondria and antagonise CypA	C57BL/6 mice	n/a	AIF (↓) Hsp70 (↓) Cytochrome c (↓) Calpain1 (↓) Cleaved PARP (↓) CypA (↓)	x	x	2
1. Enhanced hair shaft elongation 2. Delay catagen	Ex vivo human HF organ culture	NFATc3 (↑)	n/a	x	x	3
1. Accelerated anagen re-entry	Transgenic Flash Mice	n/a	n/a	✓ Increase	x	4
1. Induce transcriptional changes in HFSCs 2. CsA treated mice develop accelerated hair regrowth during pregnancy	CD-1 male Mice (microarray) CD-1 female Mice (pregnancy experiments)	Microarray data set available <i>Nfatc1</i> (↓) <i>Prlr</i> (↓) <i>Pthlh</i> (↓) <i>Cd44</i> (↓)	PRLR (↓)	x	x	5
1. Enhances hair shaft elongation 2. Increased growth factor expression	Vibrissae organ culture	<i>Vegf</i> (↑) <i>Hgf</i> (↑) <i>Ngf</i> (↑) <i>Fst</i> (↓)	n/a	x	x	6
1. Inhibits NFATc2 nuclear translocation 2. Reduces cyclin G2 expression in follicular keratinocytes	Wistar rats	n/a	CCNG2 (↓)	x	x	7
1. Anagen induction	C3H mice	Microarray data set available	n/a	✓ Lef1 mRNA increase within microarray data set	x	8
1. Enhances proliferation of ORSK and DPCs	Human folliculoid microspheres	TGFβ2 (↓)	n/a	x	x	9

within microspheres		(HFM)					
1. Precocious entry into anagen	NFATc1fl/fl, K14-Cre negative	n/a	NFATc1 (↓)	x	x	10	
2. Increased HFSC colony formation	K14-H2BGFP						
3. Inhibits NFATc1 nuclear translocation	mice (colony forming experiment)						
1. Anagen induction	C57BL/6 mice Cultured Human ORS and DP cells	SAP102 (↑) Erbb2ip (↑) HNF-6 (↓)	n/a	x	x	11	
1. Delays catagen 2. Stimulation of hair growth	C57BL/6 mice (catagen delay) Nude mice (anagen induction) Hair epithelial cells	n/a IL-1α (↑) <u>note:</u> only in nude mice TGFβ (↓) p21waf1/cip1 (↓) p27kip1 (↓) Involucrin (↓) Loricrin (↓) Bax (↓) P53 (↓) ICE (↓)		x	x	12	
1. Promotes hair epithelial proliferation	C3H/HeNCrj isolated hair epithelial cells	n/a	PKC-α, (↓) PKC-βI (↓) PKC-βII (↓) PKC-η (↓)	x	x	13	

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